1. A substantially pure mannin-binding lectin associated serine protease-2 (MASP-2) polypeptide.

2. The polypeptide of claim 1, said polypeptide being capable of associating with mannan-binding lectin (MBL).

3. The polypeptide of claim 1, said polypeptide being conjugated to a label or toxin.

sub B1

4. A polypeptide containing the sequence identified as SEQ ID NO. 1.

5. A polypeptide according to claim 4 with a molecular mass of 20K.

6. A polypeptide with a molecular mass of 52K and containing the sequence identified as SEQ ID NO 1.

7. The polypeptide of claim 1, said polypeptide having serine protease activity.

sub B2

8. A polypeptide of claim 1, said polypeptide being capable of MASP-2 activity in an *in vitro* assay for MBLectin complement pathway function.

9. A polypeptide according to claim 1, said polypeptide being capable of competitively inhibiting MASP-2 serine protease activity.

10. A polypeptide according to claim 1 comprising a fragment of the polypeptide of SEQ ID NO:2, said polypeptide being a competitive inhibitor of complexing of MBL/MASP-2.

11. A polypeptide according to claim 5 or claim 6, said polypeptide having the amino acid sequence of SEQ ID NO:2.

12. A compound capable of competitively inhibiting serine protease activity of MASP-2 or a fragment thereof.

13. An isolated nucleic acid molecule of claim 5, the molecule comprising a nucleotide sequence encoding a polypeptide having sequence that is at least 85% identical to the sequence of SEQ ID NO:1 or 2.

14. An isolated nucleic acid sequence encoding a mannan-binding lectin associated serine protease-2 (MASP-2) polypeptide according to claim 1.

15. A nucleic acid vector comprising the nucleic acid molecule of claim 14.

16. The nucleic acid vector of claim 15 wherein said vector is an expression vector.

17. The vector of claim 16, further comprising a regulatory element.

18. An antibody produced by administering an MASP-2 polypeptide according to claim 1 to an antibody producing animal.

19. An antibody that selectively binds to MASP-2.

20. The antibody of claim 18 or claim 19, wherein said antibody is a monoclonal antibody.

21. The antibody of claim 18 or 19, said antibody being coupled to a compound comprising a detectable marker.

22. A pharmaceutical composition comprising the polypeptide of claim 1 or the antibody of claims 18 or 19.

23. A method for detecting mannin-binding lectin associated serine protease-2 (MASP-2), said method comprising:

(a) obtaining a biological sample;

(b) contacting said biological sample with a MASP-2 polypeptide specific binding partner that specifically binds MASP-2; and

(c) detecting said complexes, if any, as an indication of the presence of mannin-binding lectin associated serine protease-2 in said sample.

24. A method according to claim 23, in which the specific binding partner is an antibody.

25. A method for detecting MASP-2, said method comprising an assay for MASP-2 complement fixing activity.

26. The methods of claims 23 or 24 for quantitative assay of MASP-2 or MASP-2 activity in biological samples.

27. A method for detecting MASP-2 nucleic acid expression, comprising detecting RNA having a sequence encoding a MASP-2 polypeptide by mixing the sample with a nucleic acid probe that specifically hybridizes under stringent conditions to the nucleic acid of claim 13 or 14.

28. A method for treating patients deficient in MASP-2 by administering to the patient the peptide of claim 1.

29. A method for treating patients deficient in MASP-2 by administering to the patient nucleic acid according to claim 13 or 14.

30. A method for inhibiting the activity of MASP-2 by administering to the subject a compound that inhibits expression or activity of MASP-2.

31. The method of claim 27 in which the compound is a MASP-2 anti-sense nucleic acid sequence.

32. The method of claim 30 comprising administering a compound that inhibits complexing of MBL and MASP-2.

33. An assay for polymorphisms in the nucleic acid sequence encoding MASP-2.

34. A method of detecting the presence of MASP-2-encoding nucleic acid in a sample, comprising mixing the sample with at least one nucleic acid probe capable of forming a complex with MASP-2-encoding nucleic acid under stringent conditions, and determining whether the probe is bound to sample nucleic acid.

35. A nucleic acid probe capable of forming a complex with MASP-2-encoding nucleic acid under stringent conditions.

36. An assay for polymorphisms in the polypeptide sequence comprising MASP-2 or its precursor.

37. A method for diagnosing a disorder associated with aberrant expression of MASP-2, comprising obtaining a biological sample from a patient and measuring MASP-2 expression in said biological sample, wherein increased or decreased MASP-2 expression in said biological sample compared to a control indicates that said patient suffers from a disorder associated with aberrant expression of MASP-2.

38. A method for diagnosing a disorder associated with aberrant activity of MASP-2, comprising obtaining a biological sample from a patient and measuring MASP-2 activity in said biological sample, wherein increased or decreased MASP-2 activity in said biological sample compared to a control indicates that said patient suffers from a disorder associated with aberrant activity of MASP-2.

39. A method of assaying for activity MBL-complexed MASP, the method comprising

providing a sample to be assayed and substantially reducing any artifact resulting from activation of the classical complement fixing pathway by conducting the assay in the presence of an ionic strength high enough to effectively reduce activation of the classical complement fixing pathway but not so high as to substantially interfere with activity of MBL-complexed MASP.

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